

**Amendments to the Abstract:**

Please replace the Abstract on the title page of the PCT application with the following Abstract. A clean copy of the Abstract identified as page 14 is attached for scanning purposes by the USPTO. No new matter has been added.

The invention relates to a medical X-ray device 5 arrangement for producing three-dimensional information of an object 4 in a medical X-ray imaging medical X-ray device arrangement comprising an X-ray source 2 for X-radiating the object from different directions and a detector 6 for detecting the X-radiation to form projection data of the object

4. The medical X-ray device 5 arrangement comprises:

- means 15 for modelling the object 4 mathematically independently of X-ray imaging
- and means 15 for utilizing said projection data and said mathematical modelling of the object in Bayesian inversion based on Bayes' formula

$$p(x | m) = \frac{p_{pr}(x)p(m | x)}{p(m)}$$

to produce three-dimensional information of the object, the prior distribution  $p_{pr}(x)$  representing mathematical modelling of the object, the object image vector  $x$ , which comprise values of the X-ray attenuation coefficient inside the object,  $m$  representing projection data, the likelihood distribution  $p(m|x)$  representing the X-radiation attenuation model between the object image vector  $x$  and projection data  $m$ ,  $p(m)$  being a normalization constant and the posteriori distribution  $p(x|m)$  representing the three-dimensional information of the object 4.